DEEP OPERATIONS IN AIRLAND BATTLE DOCTRINE: THE EMPLOYMENT OF U.S. GROUND FORCES IN DEEP OPERATIONAL MANEUVER

A Monograph
by
Major Darrell E. Crawford
Aviation

School of Advanced Military Studies
United States Army Command and General Staff College
Fort Leavenworth, Kansas
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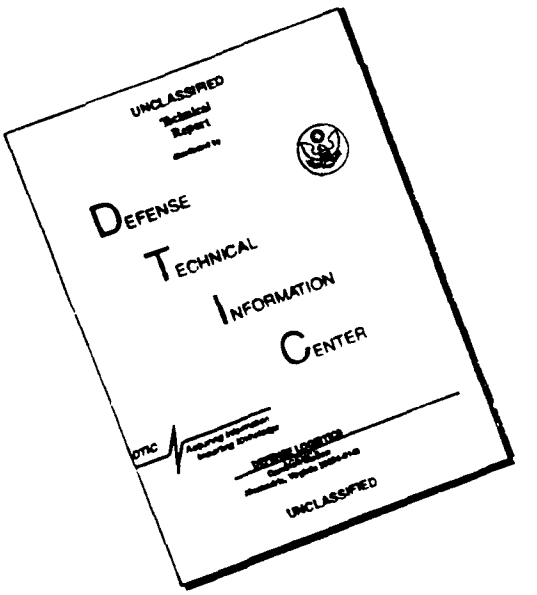

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ABSTRACT

DEEP OPERATIONS IN AIRLAND BATTLE DOCTRINE: THE EMPLOYMENT OF U.S. GROUND FORCES IN DEEP OPERATIONAL MANEUVER, by MAJ Darrell E. Crawford, USA, 32 pages.

In Soviet Army doctrine, deep operations has been a long time in development and is manifested today in the Operational Maneuver Group. As the name implies, the Soviet emphasis is at the operational level. The mission of an OMG would be to penetrate enemy defenses, raiding deep to destroy vital targets and seize key objectives while avoiding decisive engagement. It is a ground maneuver concept conducted by a carefully tailored, ad hoc military formation controlled by the operational commander.

In the U.S. Army deep operations is a relatively new doctrinal development; the emphasis is on operational fires and electronic warfare rather than on ground maneuver. The Soviets recognize the threat to their follow-on echelons posed by high technology weaponry, however, and if the Warsaw Pact invades it will most likely be a surprise attack by only forward deployed forces pushed up into a single echelon. This suggests that the NATO strategy, based in part on timely warning and FOFA, might be obsolete, or might not be an effective deterrent. It also suggests that on a central European battlefield characterized by meeting engagements between large units, deep operational maneuver might have an increased significance in the outcome of the war.

The question that this paper seeks to answer is what could the U.S. Army gain by having a concept for deep operational maneuver by ground forces in a mid- to high-intensity war? To answer this question I (1) analyze Soviet deep operations theory to determine how their concept developed and what they expect an OMG to accomplish, (2) evaluate AirLand Battle doctrine and determine the current role of deep operations, (3) compare Soviet developments to U.S. capabilities to determine the potential of U.S. ground forces in deep operations, and (4) determine if a concept for deep operational maneuver by ground forces could benefit the U.S. Army. A NATO-Warsaw Pact scenario is used as a model within which to analyze the problem. A surprise attack is assumed.

This study concludes that an operational expansion of the current deep operations concept could benefit the Army by providing a model that commanders could use to plan and train for bold maneuver of large units over long distances. It would also be an excellent vehicle for preparing them to conduct engagements in a fluid, uncertain environment. An explicit framework for the employment of ground forces in deep operations to achieve operational aims would fit well into existing doctrine, and could help deter enemy attack.

Three implications that result from this study are that: (1) brigades might be the best formation to maintain as self-supporting tactical entities with divisions being primarily warfighting headquarters that can receive whatever mix of brigades, by type, that the situation calls for; (2) airmechanization, a combined arms, maneuver oriented concept that can be applied at the operational level, is a useful construct when considering deep operations; and (3) the Army should reconsider its Aviation Modernization Plan--pursuing the development of an advanced cargo aircraft designed to maintain air lines of support to maneuver units might be more prudent than a commitment to LHX at the expense of other systems and programs.

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DEEP OPERATIONS IN AIRLAND BATTLE DOCTRINE: THE EMPLOYMENT OF U.S. GROUND FORCES IN DEEP OPERATIONAL MANEUVER

I. INTRODUCTION

Both Soviet and U.S. warfighting doctrines recognize the importance of deep operations in a mid- to high-intensity war. In the Soviet Army that doctrine, a long time in development and manifested today in the Operational Maneuver Group, is an integral part of the overall [illegible] for waging war. As the name implies, the Soviet emphasis is at the operational level of war. The mission of an OMG would be to penetrate deep, [illegible] deep to destroy vital targets and seize key objectives while avoiding decisive engagement.[1] It is a ground maneuver concept conducted by a carefully tailored, ad hoc military formation controlled by the operational commander and intended to achieve operational aims.

In the U.S. Army deep operations is a relatively new doctrinal development, but Airland Battle doctrine takes a decidedly narrow view of it; the definition places its emphasis on operational fires and electronic warfare targeted at follow-on forces instead of on ground maneuver. But contemporary writings indicate that the Soviets recognize the threat to their follow-on echelons posed by high technology weaponry, and if a Warsaw Pact invasion was mounted in the near future against Europe it would most likely [illegible] pushed up into a single echelon. This suggests that the NATO strategy based in part on timely warning and FOFA might have become at best obsolete, and at worst might not be an effective deterrent. It also suggests that in the non-linear melee of a central European battlefield characterized by meeting engagements between large units, maneuver warfare in general, and deep operational maneuver in particular, might have an increased significance in determining the outcome of the war.

The premise of this paper [illegible] the U.S. Army gain by having a concept for deep operational

maneuver by ground forces in a mid- to high-intensity war? To answer this question I will (1) analyze Soviet deep operations theory to determine how their concept developed and what they expect an OMG to accomplish, (2) evaluate AirLand Battle doctrine and determine the current role of deep operations, (3) compare Soviet developments to U.S. capabilities to determine the potential of U.S. ground forces in deep operations, and (4) determine if a concept for deep operational maneuver by ground forces could benefit the U.S. Army.

[illegible] have to fight in a large scale [illegible] war, and NATO is the [illegible] NATO-Warsaw Pact scenario will be used as a model within which to analyze the problem. Within NATO, a surprise attack will be assumed because

> *"In recent years, many land warfare experts have worried about the Soviets' ability to conduct theater-strategic conventional operations--win a land war in Western Europe so quickly that NATO could not react in time."*[2]

According to analyst Philip Karber of BDM Corporation one implication of the only recent Soviet admission that OMG's ever exist is that ". . . it confirms that there has been a true Soviet threat for surprise invasion . . . ."[3]

To be beneficial deep maneuver must accomplish more than [illegible] effect. The advantage that is to be potentially gained must also outweigh the inherent risk of such an operation, because the U.S. would be outnumbered in any conceivable Eurasian scenario and could not afford to lose large military formations or needlessly expend considerable quantities of resources.

II. SOVIET ARMY DEEP OPERATIONS

The *operational level of war* can be defined as that level where the movement and combat of major military formations is

sequenced to achieve specific aims within a predictable time span in order to accomplish strategic military objectives. This level grew out of the growing complexity of war and the rejection of the idea that wars could be won in a single, climactic battle. The Soviets were the first to contemplate the implications of this new level and, because of their strategic position, their thinking centered around the problems of maneuver warfare. Soviet thinking and experience led them to the conclusion that a large land war between modern armies required simultaneous and sequential operations in depth and that a concept for the execution of the deep battle was necessary.

[illegible] Theory

Clausewitz placed genius at the center of his theoretical speculations. By genius he ". . . meant not only originality and creativity raised to their highest power but also, as he wrote in On War, gifts of mind and temperament in general."[4] If this is true, Mikhail Nikolaevich Tukhachevskii was a genius. Among his many achievements he:

> *. . . practically created both the Soviet "military science" of the day and the model and standards for that science's further development. Then . . . his openness of mind and technical awareness allowed him, in conjunction with Triandafillov, to re-think his whole concept of land operations and move from broad front to deep battle. At the same time, he at once laid the tech- [illegible] of the Soviet art, [illegible] large [illegible] in the shape of several mechanised corps.*[5]

Perhaps his greatest achievement was leaving behind him an establishment and tradition which would in 1942 provide the springboard for the Red Army's ultimate victory over Germany.

The point of departure for Tukhachevskii's operational and tactical thinking was the idea of simultaneously neutralizing the enemy throughout his entire tactical depth, referred to as *simultaneity*, [illegible] experience in the Russian Civil War as an army and front commander

and his knowledge of the dimension and types of the 1920's infantry battlefield, he felt that a broad front strategy was necessary to achieve simultaneity. This approach required that the enemy be attacked across the entire front with infantry so that the weakest point could be identified and breached. When this was done, the reserve shock army of several cavalry corps, heavily supported by artillery, would be inserted to attack the [illegible] called the "deepening idea".[5]

In the late 1920's, the deepening idea, spurred by [illegible] strategy to that of deep battle. What motivated Tukhachevskii was [illegible] recognition of the importance of mechanization, the potential of aviation, and their predictions of more lethal weapons with greater ranges. They concluded that, theoretically, the new [illegible] throughout the force, but in fact this would not occur until World War II. They decreed that the reserve shock army should be the first to [illegible] front so it could more quickly exploit a breach and strike into the enemy's rear. To do this the shock army itself had to be sufficiently large, and correspondingly strong enough to penetrate the defenses and execute the entire series of offensive operations with its own organic forces.

In deep battle, then, a main axis had to be selected in [illegible] representing a significant departure from the broad front strategy. At the same time the need to echelon the forces on the main axis and to design special equipment, such as heavier tanks for the penetrating forces and lighter ones for the exploiting forces, was recognized. After Triandafillov's death in 1931, Chief of Army Staff Tukhachevskii set about reorganizing the army and sponsoring the development of advanced equipment to fulfill [illegible]

In the early 1930's deep battle began to evolve into deep operations, which required the cooperation of aviation with airborne, mechanized, and motorized units, and for the whole force to operate independently of the main formation. The new organization was intended to reach to a depth sufficient enough for the attacker to effect operational reserves, tactical airfields, and army headquarters.

The main problem was how to turn a tactical penetration into an operational breakthrough. To seek answers to this and other problems, an operational faculty was set up at the Frunze Academy to study deep operations. During this period, Tukhachevskii, who was then the commander of the Leningrad Military District, made massive inputs to the theory and published the first part of his book, New Questions of War.[8] In 1936 the Academy outlined the initial scheme for deep operations:

> *(a) the operational grouping of an army for the break-in should provide for two echelons--the attack echelon, made up of all-arms formations reinforced with artillery and tanks; and the development echelon, comprising highly mobile mechanised, motorised and cavalry units and tasked to extend the tactical breach in the defence to operational depth*
> *(b) the development echelon should be committed directly after the first enemy defended area had been breached . . . (and) must take on the enemy's second defended area before it could break loose or deal with his reserves*
> *(c) the entire operational development of the penetration at army level would extend to a depth of 80-100 kilometres--up to the line of the enemy's main supply dumps and army headquarters*
> *(d) army aviation (light bomber and ground attack units) would be employed on preparation of the break-in and, in depth, on operational co-operation with the development echelon, preventing the enemy reserves from intervening and offering resistance in depth*
> *(e) front . . . aviation (long-range bombers) would be tasked to isolate the break-in sector completely from the enemy's strategic depth, and to interdict movement of his strategic reserves*

(f) airborne forces would go in at the depth of the enemy's main supply dumps and army headquarters, with a view to co-operation with the development echelon.[9]

Because the operational aspects of the deepening idea were still being worked out, only the tactical concept of deep battle entered Soviet doctrine with the publication of Field Service Regulations 1936 (PU-36); deep operations were only tentatively discussed in that regulation. A higher operational school, the General Staff Academy, was established in 1932 to pick up where the Frunze Academy had left off and further the development of deep operations theory. Despite a period of heated debate concerning what the new theory would teach in the strategic realm, it made significant contributions in the development of theory, operational art and the training of higher commanders and staffs in the conduct of deep operations. For example, in determining when and at what depth to commit the development echelon, three techniques were offered: against a weak opposition send it straight through without a break-in battle; under normal conditions insert it once the enemy's tactical depth had been penetrated; against very strong defenses it should reinforce the attack echelon and then exploit success.[10]

Another example of how the General Staff Academy contributed to the growing body of knowledge surrounding deep operations concerned

. . . the actions of the development echelon at operational depth. In the "short" variant, the main body would go about 30 kilometres deep and take on the enemy's second defended area, putting out only motorised reconnaissance patrols and raid parties beyond this depth. In the "deep" play, out to 100 kilometres, the development echelon would go straight for the enemy operational reserves in co-operation with aviation and airborne forces, sending out mechanised infantry on raids against enemy static installations or on blocking actions. The third "combined" variant employed two development echelons, one from each of two flanking armies, to surround and destroy major enemy groups.[11]

The work of the General Staff Academy led to a new version of the Field Service Regulations, *PU-39*, which fully expressed deep operations theory. Probably because of the military purges of 1937-38 and the long shadow they cast over Tukhachevskii's ideas, the manual was not published. However, it was revised in 1941 and its operational concepts influenced Soviet conduct of the war, particularly the development of the instrument that was to conduct their deep operations and thus lead their counteroffensives: the mobile groups.

The Soviet OMG Concept

The Operational Maneuver Group (OMG) concept is a direct result of the theory of deep operations developed at the Frunze and General Staff Academies in the 1920's and the practical experience gained during the Great Patriotic War (World War II). Whereas World War II mobile groups were supposed to encircle large enemy groupings and inflict whatever collateral damage they could as they went (destroy headquarters, supplies, etc.), the short and potentially nuclear nature of a modern conflict against NATO places different requirements on the OMG. NATO would be at a numerical disadvantage in any large scale conventional war against the Soviets and, consequently, has adopted a first use policy for nuclear weapons in order to maintain a credible deterrent. The Soviets, therefore, hope that an early introduction of OMG's into NATO's operational depth will prevent the establishment of a stable defense and that the intermingling of forces and fast pace of operations will preempt the use of nuclear weapons to restore the situation.

In essence, the theater strategic aim of modern Soviet deep operations is to defeat NATO nuclear strategy, while the operational aim is still the destruction of large enemy formations. But instead of the encirclement of those forces being the primary goal and confusion and panic being the secondary, as mobile groups tried to do, OMG's seek primarily to physically or psychologically dislocate the enemy in order to create the conditions for their defeat in detail, with encirclement being a goal only if the circumstances will allow it.

The headquarters that is able to command and control a modern OMG is at a lower level than its World War II predecessor. Soviet tank armies in 1944-45 had around 500 tanks, while their [illegible] tank divisions have 500 tanks and BMP's and their armies over 1400. With the addition of supporting artillery and air assault forces a *front* OMG consisting of a modern tank army simply becomes too unwieldy to command and control, and difficult to sustain over an extended LOC. Further, an army headquarters is not capable of controlling two battles simultaneously (due to its tactical nature and its limited means to command and control), making it impossible for both the attack and development echelons (which fight two distinct battles) to be under the same army headquarters. The Soviets, therefore, have developed plans for a smaller, specially tailored force under the command of an ad hoc corps headquarters for *front* level OMG operations.[12]

Another thing that is different about the *front* level OMG from the old mobile group is its echelonment. During many World War II operations, Belgorod-Khar'kov being a good example, the armored forces making up the mobile group would plunge into operational depth, but follow-on *infantry* and other support (CS and CSS) were not able to keep up. The armored forces, therefore, became vulnerable to counterattacks with the whole operation being subject to defeat in detail. Today, the virtually equal mobility of infantry and the inherent combined arms nature of all formations solves the old problem but at the same time creates a new one: on the one hand there is less separation and more continuity between the advancing armor and following support, but on the other hand the enemy has the same mobility, thus increasing the danger of exposed flanks and overextension of the line of operations. To alleviate these problems the OMG has become less armor and more combined arms oriented, with a motorized division following the tank division as a second echelon to cover artillery deployment, send out raids, and protect the LOC's.

The OMG's objectives depend on the level involved. A Soviet army level OMG, most likely a reinforced armored division,

> *. . . acts as a large operational raiding force. Typically it is assigned an ulti-*

> *mate objective or objectives . . . but is expected to disrupt, capture, or seize other objectives along the way, while attempting to avoid a decisive engagement with large enemy forces.*[13]

A *front* OMG, an ad hoc corps, will be expected to help the first operational

> *. . . echelon penetrate the enemy defenses, if required, and then to raid deep into the enemy rear as early in the offensive as possible . . . to destroy enemy nuclear weapons, air defenses, communications, command and control, to seize airfields or disrupt lines of communication, and to assist advancing main forces by seizing bridgeheads, road junctions and so forth.*[14]

For an OMG to have its greatest effect it must not be committed too soon, too late, too shallow, or too deep: it should be inserted precisely at the time and place that the attack echelon achieves operational depth. ***Operational depth***, however, ". . . is not just the rear edge of the defended zone, but

SOVIET DEEP OPERATIONS CONCEPT

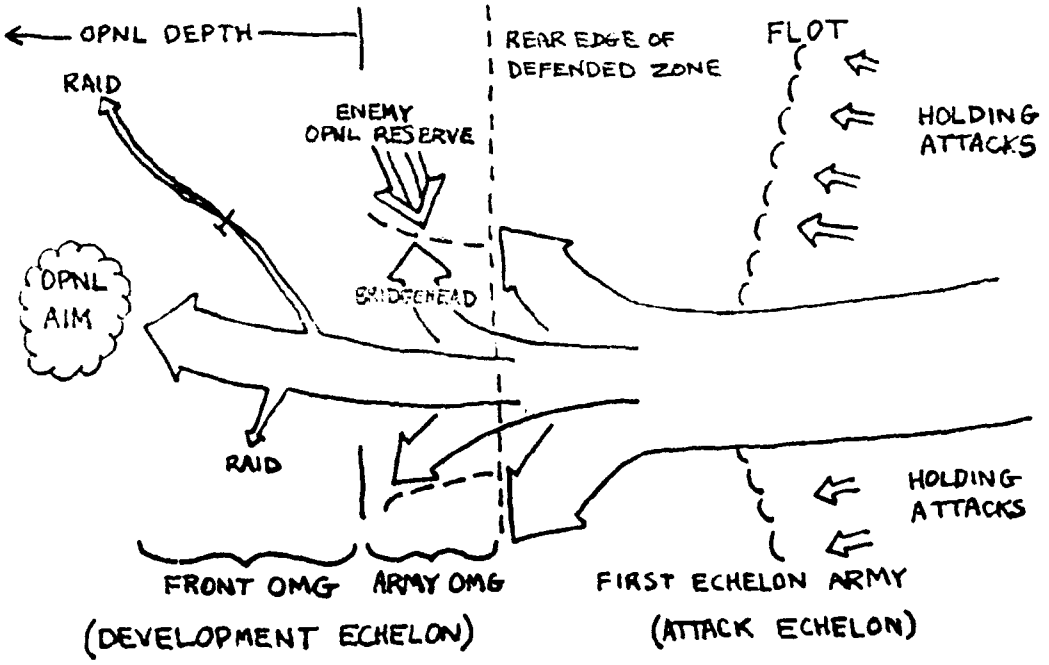

FIGURE 1

includes the additional depth the mobile force needs to develop its initial manoeuvre."[15] It is in the achievement of this additional depth where the difference between the two levels of OMG, army and *front*, can best be understood (Figure 1). Among the armies that make up the *front's* first operational echelon, the ones on main axes are, in deep operations terms, attack echelons. Their mission is to penetrate enemy defenses to the rear edge of the tactical defended zone. Once that is accomplished, the army OMG would then be inserted at the crucial time to secure a sort of bridgehead beyond the defended zone for the *front* OMG to pass through and continue deep into the enemy rear with a loss of momentum. Together, the two OMG's constitute the *front's* development echelon, and both would be controlled by the front commander.

Time and space calculations are essential to a modern Soviet deep operation against a prepared defense. The Soviets have studied the aspects of mobile group operations intensely (and have

OPERATIONAL MANEUVER INDICES

Opnl Man Force	Strength Tks/SP Guns	Commitment to Combat: Sector Width	No. Rts	Depth (Km)	Day	Msn Depth	Duration (Days)
Tk Army	1300-1500	16-24 (nuclear scared)	4-6	0-80	1-3	250(1) 300(2)	7 5
		10-16 (conventional)				350(3)	3
Tk Div	322	8-12 (nuclear scared)	2-3	0-60	1-2	100(1) 120(2) [illegible](3)	4 3 -
		5-8 (conventional)					
MRD	265	8-16 (nuclear scared)	2-3	0-3	1	50(1) 60(2) 70(3)	3-4 2-3 1-2
		5-10 (conventional)					

Notes: (1) Prepared defense;
(2) Partially prepared defense
(3) Unprepared defense;
(4) All units deployed in 1-2 echelons.

TABLE 1

many World War II examples to use) to develop norms to guide their employment of operational maneuver forces. Table 1 shows some of the indices on which these norms are based.[16] Against an unprepared defense, time and space calculations, although still critical, take a back seat to the sound understanding of operational procedures and their rigorous application.

Conclusion

Considering Soviet history and geography (especially in this century), the size of their army, and their emphasis on maneuver warfare, their development of a level of war between tactics and strategy is not surprising. Given these circumstances, the formulation of a deep operations concept is even less surprising.

Soviet OMG's will be highly mobile, heavily reinforced combined arms teams with enough strength and flexibility to send out both ground and air task forces on raids against selected targets. To be successful they must be committed in carefully orchestrated, critically timed echelons along well established lines of communication. The maneuver groups will attempt to move rapidly through unprepared or defeated NATO forces to reach operational depth, and once there they could be expected to physically or psychologically dislocate the enemy and create the conditions for their ultimate defeat.

III. U.S. ARMY DEEP OPERATIONS

The Soviets apparently have two concerns about their ability to succeed during a war in Europe: emerging technology weapons and the serious attention being paid to the operational level of war by some members of the Alliance.[17] The new weaponry threatens to revolutionize the battlefield the way that nuclear weapons did, and despite their growing technological sophistication the Soviets still maintain a healthy respect for the West's technological capability and economic potential. As for operational art, what troubles the Soviets is that an increase in operational sophistication would mean better control by higher commanders and,

thus, a more effective integration of both the existing forces and the new weaponry.

Doctrine

FM 100-5, Operations, officially, if belatedly, introduced the operational level of war to the U.S. Army in 1982. Despite the fact that the American Army is 60 years or so behind the Soviets in its thinking at the operational level there has been no shortage of ideas or opinions in the spirited, and sometimes heated debate over the new AirLand Battle Doctrine and its underlying operational concept. Soviet reaction to the growing American awareness of operational art and the interest it has kindled among NATO allies pays tribute to the strides that have been made. But the debate has done little to develop for inclusion in our doctrine any kind of concept for the employment of ground forces in deep operations.

AirLand Battle doctrine divides the battlefield into three interrelated areas of operation, referred to as close, deep, and

AREAS OF OPERATION

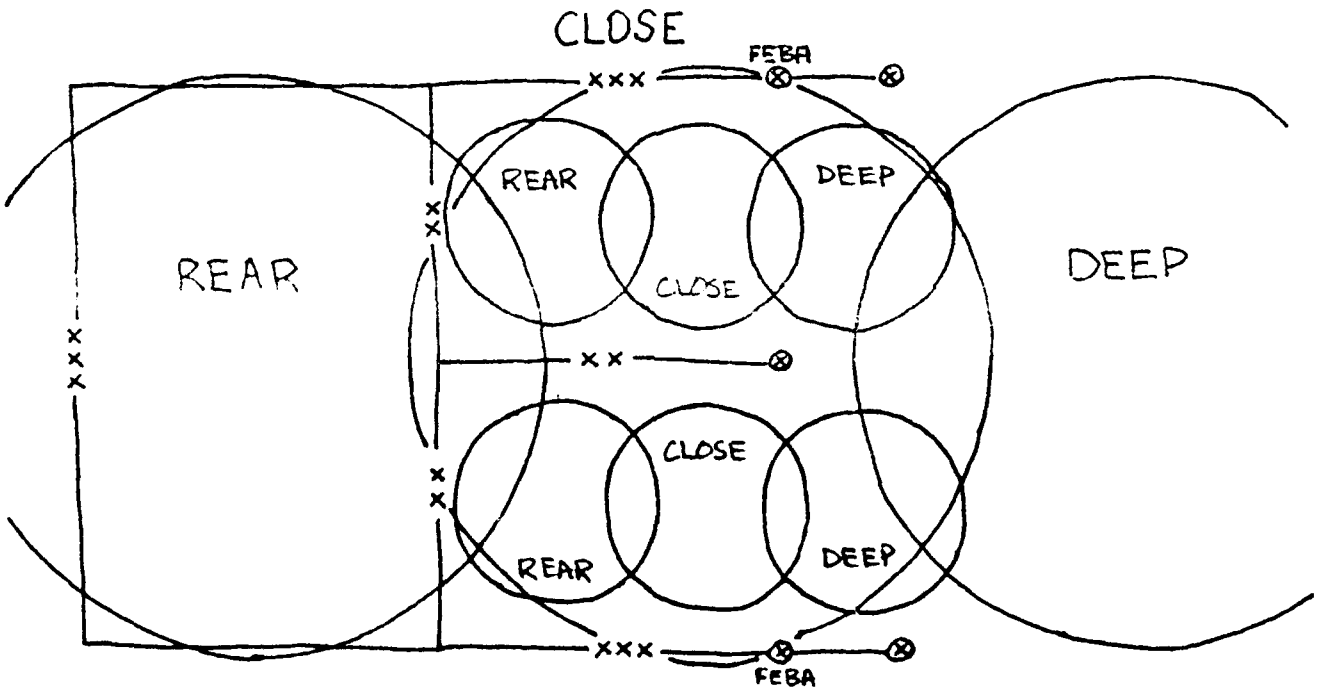

FIGURE 2

rear, with each level's close area roughly encompassing the close, deep, and rear areas of its immediate subordinate (Figure 2). *Deep operations* are the activities directed against enemy forces in the deep area. An examination of doctrine reveals what the Army currently expects to accomplish with ground forces when conducting its deep operations.

FM 100-5 states that, at the operational level, deep operations should ". . . include efforts to *isolate current battles* and to *influence* where, when, and against whom *future battles* will be fought"[18] (my emphasis). Although ground maneuver is mentioned as a possible means of conducting deep operations the priority in the Army's keystone warfighting manual is clearly on operational fires and electronic warfare, both explicitly and implicitly. What AirLand Battle doctrine would have major military formations accomplish in their deep operations can be seen in the supporting doctrinal manuals for those formations. FM 100-6, Large Unit Operations, does not even mention deep operations. Fm 100-15, Corps Operations, discusses deep operations solely in relation to their impact on the corps' own close fight. There is no discussion of the corps or one of its subordinate divisions penetrating enemy defenses and raiding deep to destroy vital targets and seize key objectives while avoiding decisive engagement.

Interestingly, the division level doctrinal manual does address deep operations in support of higher headquarters. FM 71-100, Division Operations, states that "division deep operations are not a function of depth, but a function of what forces are being attacked and the intent of the operation." It goes on to say that "the division will conduct deep operations . . . as a unit in support of a corps or EAC operation or it may commit organic and supporting division elements to deep operations in support of the division tactical plan . . . ."[19] While there is an unmistakable operational implication in these statements, no concept currently exists in corps, EAC (echelons above corps), or, indeed, U.S. Army doctrine within which the division can plan, train, and ultimately execute deep operations to achieve operational objectives. Just as FM 100-5 does, all of these

manuals place the emphasis for deep operations on indirect fire, air, and EW.

Ironically, AirLand Battle doctrine's fundamental tenets, initiative, agility, depth, and synchronization, would seem to encourage the development of a deep operations concept. FM 100-5 encourages its readers to think (and, correspondingly, act) in a way that would be conducive to a concept such as deep operational maneuver by a specially tailored military formation intended to achieve operational aims: by encouraging commanders to visualize the theater, the enemy, and future operations, and then shape events to achieve the desired theater strategic aims; by defining operational maneuver and declaring its purpose to be the exploitation of tactical successes to achieve operational results; by promoting initiative, mental flexibility, boldness, and a willingness to accept risk; by encouraging aggressive, high momentum operations that build and sustain a tempo capable of pressing the fight to a successful conclusion; by describing turning movements that avoid defenses and instead seek to secure critical objectives deep in the enemy's rear; by encouraging flexibility in the defense through the maintenance of an operational reserve and a timely return to offensive operations; and by providing an operational framework as a common reference for all.

Conclusion

Unlike the Soviets, U.S. deep operations is not a concept for the employment of ground forces in pursuit of operational aims, but rather a set of activities, primarily air, artillery, and EW, with only limited operational significance. The evidence suggests that although the U.S. Army has no explicit OMG-like concept, AirLand Battle doctrine could conceivably support such an idea. Further, it would seem that the writers of divisional doctrine have been infected by the strong maneuver orientation of the still relatively new U.S. doctrine and have taken the initiative in exploring its possibilities and implications. The question of what the U.S. might accomplish by conducting Soviet style deep operations with ground forces needs to be examined.

IV. ANALYSIS AND EVALUATION: U.S. GROUND FORCES IN DEEP OPERATIONS

If a major land war between Soviet and Western alliances on the European or Asian continents was opened by the Soviet side, the West would initially be on the operational as well as the strategic defensive. Even though the defense would be a "shield of blows," to borrow Clausewitz's term, under current doctrine the *blows* made by ground units would be only tactical ones; the operational blows would be made by operational fires, with the stated aim (in the context of an overall defense) being only to create more favorable conditions for the close fight. The current American concept of deep operations thus cedes the operational initiative because it accepts this defensive condition and relies on close operations--the tactical battle--to blunt the attacker and create the conditions for the operational offensive. This operational defensive featuring tactical counterattacks amounts to the acceptance of battle on Soviet terms.

The West must take the operational offensive both for political reasons and to gain anything decisive; the question is how and when to do it. If an operational counterstroke was launched while the enemy was still attacking there would probably be gaps that could be exploited. By exploiting these gaps the enemy could be forced to take up a hasty defense, or even change his plan, and "maintaining the operational plan is the primary task of regimental through *front* commanders."[20] There are two forms that this theater, or regional counterstroke could take: an attack directly into the front or flank of the enemy's main effort(s) (an *attrition strategy*--the change of mass over time); or an indirect approach aimed at an enemy weakness (a ***maneuver strategy***--where space interacts with mass and time). It could be argued that in order for the indirect, or maneuver approach to be more successful, or even decisive, it should continue into the enemy's depth. Assuming that this is true, two questions emerge, each addressing the larger issue of the feasibility of deep operations by a U.S. ground force. First, what effect must a deep

operations force have to be operational? Second, what size of force would it take to produce the desired effect?

According to C.J. Dick, a research associate at the Soviet Studies Research Centre at Sandhurst, the current Soviet strategy in Europe is to mount a strong, broad front, surprise attack aimed at preempting defensive preparation and causing meeting engagements between large units.[21] Under these conditions the Soviets believe that, theoretically, they can overcome NATO defenses. To achieve this they feel they must

(1) gain at least some measure of strategic surprise,

(2) accomplish their immediate strategic objectives without follow on forces or operational pauses,

(3) advance rapidly,

(4) attack in depth,

(5) achieve air superiority,

(6) exercise centralized operational control and decentralized battle management, and

(7) take a combined arms approach.

But this strategy involves significant tradeoffs. First, they will only be able to muster an overall 2:1 advantage in divisions. Second, there will not be a follow-on echelon and only a relatively modest combined arms reserve. Third, larger and more complex combined arms formations require time for coordination while the demand for higher tempo reduces the time available. It is these weaknesses that deep operations should attack at the operational level.

Operational Aims of Deep Maneuver by U.S. Ground Forces

To achieve a 4-5:1 advantage in divisions in the main axes of advance the Soviets must thin the lines elsewhere. Undoubtedly, they will be thinned in areas where there is difficult, more easily defended terrain. Nonetheless, given the right mix of forces massed rapidly at the critical points quick breakthroughs are possible in those lightly defended areas. Because there is no follow-on echelon and only a relatively small reserve a successful penetration by a sizable, mobile force would meet less opposition once in the enemy's rear, resulting in a greater likelihood of surviving and greater freedom of action.

Finally, successful operations in the enemy's rear would exacerbate his already critical time problem by giving him still another threat to worry about, in a completely new direction, with the likely effects being to reduce his operational tempo and forcing him to become reactive--accepting our terms of battle.

To have operational effect the unit attacking deep must take a force sufficient enough to threaten the rear of the enemy operational commander and either destroy the most vulnerable of his vital systems (C^3, logistics, aviation, etc.) or force him to change his operational plan to protect them. The commander that must be thus effected is the *front*. As already mentioned, this is the lowest level headquarters they feel can fight two battles at once, and it is also the lowest one whose final objectives, i.e., political and economic centers, equate to strategic aims.

Not surprisingly the required effects are very similar to what the Soviets expect from their OMG, with one important exception: because of the relatively shallow strategic depth of Western Europe, the Soviet OMG could potentially have strategic effect. It is unlikely that a U.S. deep operation could have strategic effect, except in a situation where successful operational maneuver led to disintegration of the Warsaw Pact alliance.

A major difference in the two forces is their expendability. The size of Warsaw Pact forces means that if an OMG was destroyed it would have little strategic impact (ignoring the moral and political implications). If a U.S. deep operations force was destroyed, however, the loss would be sorely felt.

In order to achieve the desired effects the deep operations unit must at least be large enough to deal with the *front* reserve and continue to conduct operations. That reserve would most likely be one or two divisions, at least one of which would be a reinforced tank division, possibly supported by attack helicopters and an air assault brigade. The deep operations unit must also have sufficient strength and flexibility to send out raids to attack the far flung segments of the vital systems it must destroy, and to also maintain at least a degree of protection for

its line of communication (LOC). Finally, the unit must be highly mobile and logistically supportable.

The Size and Supportability of a Deep Operations Force

Before considering deep operations theory and such considerations as attack and development echelons, the first formation that leaps out as a possible deep operations candidate is a reinforced armored division, which is what constitutes the Soviet army OMG. In his article "The Cost Across the FLOT", which appeared in the September 1986 *Military Review*, COL William Brinkley concluded that logistics requirements would prevent an armored division from being a viable organization for the conduct of OMG-like deep operations to a depth of 150 kilometers. His findings are summarized in Table 2.[22]

ARMORED DIVISION SUPPLY REQUIREMENTS

Cl of Sup	Requirement in Short Tons Per Week
I	30 (low side of estimate)
III	11,577 (all vehicle/aircraft fuels)
IV	50
V	15,232 (3 hvy, 3 mod, 1 lt days combat)
VIII	14 (low side of estimate)
IX	7
Total	26,910 ST/Week
	26,910 Required
	1,235 Capacity
	25,675 ST/Week Shortfall

TABLE 2

Brinkley assumes that all of the material needed for a week-long mission would have to be carried along, owing to a long and tenuous LOC. Using his figures the division, using all organic ground vehicles, can carry less than 5% of what it requires to sustain itself. He also found that the amount of lift to haul the remaining supplies would be more than even the corps could handle.

Colonel Brinkley completed his study by saying that "cross-FLOT attacks should be limited by the depth of the attack and the time to complete the mission (for example, no more than 50 kilometers or 24 hours in duration) which can be reasonably supported by a DISCOM augmented with COSCOM or theater assets."[23]

If an armored division, the seemingly logical choice for a deep operations unit, cannot be supported to operational depth--implied by Brinkley to be around 150 kilometers--is there any other force capable of having operational effect that can?

For certain, an air assault brigade inserted into the enemy rear and supplied by air could avoid the requirements of making a potentially costly and time consuming penetration of the FLOT on the ground and of maintaining a ground LOC (GLOC). Given the air defense capabilities and the mobility and firepower of Soviet forces, however, the brigade probably could not survive, let alone accomplish the mission. Nonetheless, the flexibility and increased combat potential offered by air assault can offer an important dimension to deep operations as evidenced by Soviet plans to use that capability extensively to support its OMG's.

It is possible that an organization that joins armor and air assault under one command could produce enough combat power to accomplish operational aims deep in enemy territory, but still be lean enough to be supportable. Continuing with the division as the logical model for building a deep operations unit, armor, air assault, aviation, and artillery brigades could be task organized under one commander as a deep operations force. Each of the ground maneuver brigades, armor and air assault, would represent one third a division's strength, including combat, combat support, and combat service support, while the aviation and artillery brigades would be collected from corps and division assets. The aviation brigade would require a medium lift regiment of 3 CH-47 battalions operating from the friendly side of the FLOT, where they would leave the majority of their support.

This organization combines the strengths of the armor and air assault divisions with each complementing the other. It is unlikely that either division could achieve deep operational success independently, but together they could potentially achieve the synergism necessary to have the desired effect. The armor brigade gives the force a strong, rugged spearhead capable of exploiting a penetration made through tactical depth by a development echelon. The air assault brigade gives the force a highly flexible, heavily armed (relatively speaking) infantry

contingent capable of infiltrating and weakening prepared defenses, taking or covering difficult terrain, strongpointing key locations, and conducting a variety of miscellaneous tasks such as the handling of POW's. The attack helicopter brigade, consisting of two regiments, gives the force the ability to rapidly and agily respond to counterattacks by enemy armor, conduct long distance attacks from a secure position in the enemy's depths (thus significantly increasing the range of such operations and eliminating the necessity to penetrate the more lethal ADA concentration at the FLOT) against enemy formations moving toward the penetration, and accomplish screen and guard missions in support of armor and infantry.

Theoretically, this deep operations unit could be supported, based on the following assumptions: the unit would not penetrate farther than 150 kilometers beyond the FLOT; that a corridor free of enemy air defenses could be maintained above the GLOC; that Soviet analysis indicating that significantly less fuel and ammunition is used during surprise, high tempo operations is correct[24]; that three CH-47 battalions could be dedicated to providing a continuous ALOC; that an average of three sorties per day and a 75% operational ready rate could be maintained by the helicopters; and finally that the non-repairable loss rate of major ground and aviation equipment would not exceed the planning figures in USACGSC Student Text 101-6.* But it is highly doubtful that all of these could be accomplished in practice.

It would seem that the U.S. Army could not support deep operations with ground maneuver forces *to a depth of 150 kilometers*. But is 150 kilometers the real distance over which the force must be supported, or for that matter do forces

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* Figures from ST 101-6:[25]

Item	Offense 1st Day	2nd Day
Tank/IFV	.25	.20
Arty	.10	.10
Atk Helo	.30	.25
Cgo Helo	.20	.20
Spt Sys	.15	.15

Nonrepairable - .20
Repairable - .80

Evac/Abandon - .30
Repair onsite:
10 hour - .20
24 hour - .20
72 hour - .30

attacking deep have to even go that far to have operational effect?

Achieving Operational Depth With U.S. Ground Forces

Assuming that Brinkley's 150 kilometers is the approximate distance that a deep operations force must penetrate in order to achieve operational depth, is that the distance over which the force must be supported? Brinkley made his measurement from the FLOT and assumed that the armored division would have to operate at the end of that line. But, in Soviet theory, the attack echelon would penetrate enemy defenses to the rear of their tactical depth before committing the development echelon. This, in effect, would create a salient in the enemy line within which the forward passage of the OMG would be conducted. If the U.S. applied the same concept, the attack echelon would occupy the part of the 150 kilometer LOC forward of the FLOT but within the salient, thus reducing the distance over which the deep operations force would have to operate.

A FRONT ATTACKING A PREPARED DEFENSE

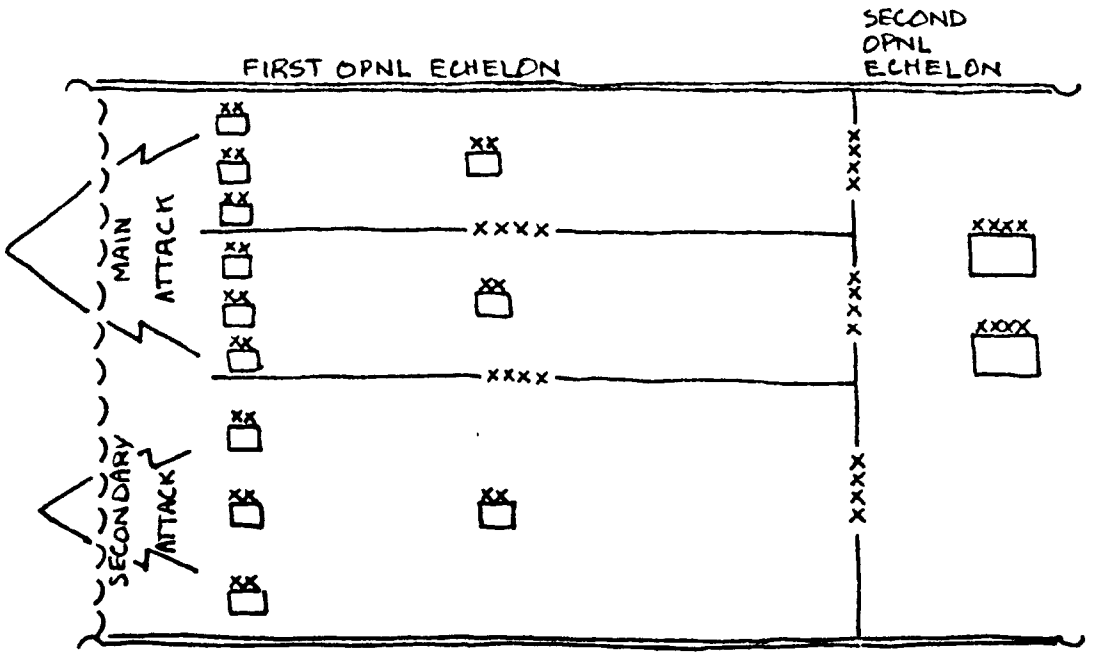

FIGURE 3

Continuing the same logic, once an American deep operations force had passed through a salient created by a development echelon, how far would they have to go to have the desired effect? In a European scenario where a Warsaw Pact invasion was preceded by adequate warning and buildup on both sides, Soviet *fronts* would have a full army in the second operational echelon and a second strategic echelon following on its heels (Figure 3).[26] In this situation of overwhelming Warsaw Pact strength and depth, a U.S. attack echelon would have to penetrate to the rear of the combined arms reserve to reach the rear of the first echelon army. The *front* commander would expect his reserve division and, perhaps, a portion of his second echelon army to deal with this incursion while the remainder of his forces continued to their objectives. Therefore, it is unlikely that the development echelon would ever break past tactical depth and doubtful that it would survive even if it did. In the final analysis the deep operation would have limited operational impact (though it could be significant tactically) and would be high risk.

If, on the other hand, C.J. Dick is right about the Soviet's desire to mount a surprise attack in Europe, then the *fronts* in the first (and, for a time, only) strategic echelon could be expected to push all of their armies forward and to form only a small combined arms reserve (Figure 4).* In that case, a U.S. development echelon conducting a counterattack to penetrate to the rear of the enemy's tactical formation would only have to reach the depth of one division in the zone of the holding attack, or two divisions in another zone. Once in the rear the development echelon would be faced by a relatively small *front* reserve which would constitute the only second echelon force, and the second strategic echelon would not be a factor in the short term because it would still be mobilizing. The deep operations force, then, would have a greater likelihood of remaining an effective fighting force.

Even if the development echelon could not be sustained out to a distance of 150 kilometers, its potential effect would still

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* This table was constructed by the author based on a review of classified and unclassified sources.

A FRONT ATTACKING AN UNPREPARED ENEMY

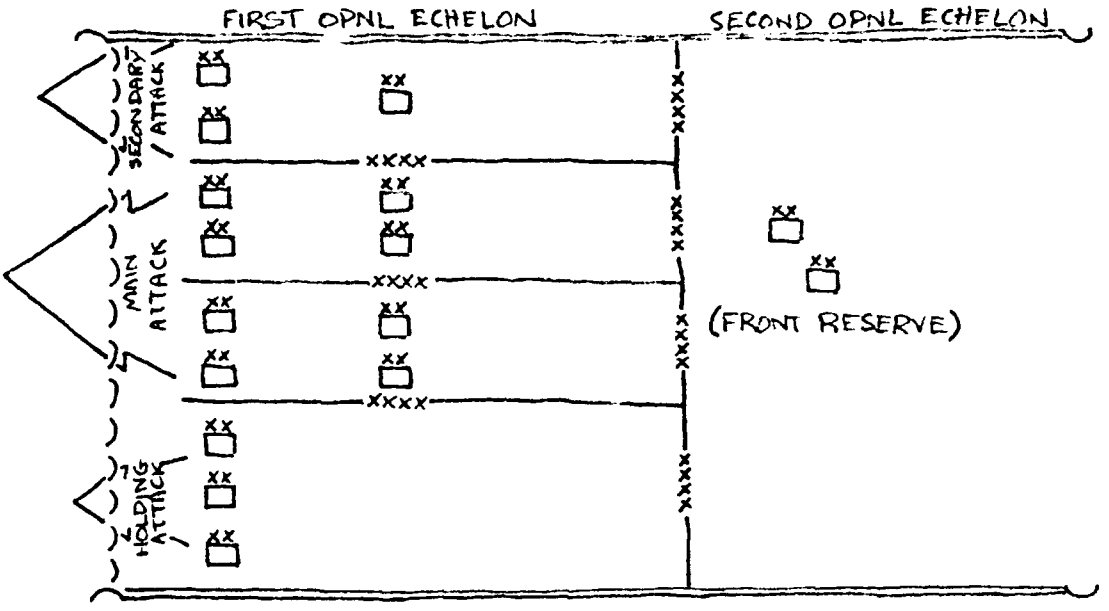

FIGURE 4

be significant. One of the main requirements of the Soviet OMG is to have sufficient strength and flexibility to send out raids to protect its own LOC's and to destroy the widely dispersed, vulnerable enemy systems in his rear. The U.S. deep operations force could likewise project raids to considerable distances, and when added to the distance already held by the development echelon within the salient, the total distance would likely be much greater than 150 kilometers.

Conclusion

Brinkley's approach to the problem is both a logistical one (see if the plan can be supported, and if it can then determine its potential effectiveness), and a negative one (proving that the task is too hard). It is true that any plan must be logistically supportable, but its development must be based upon operational requirements to accomplish the desired end-state and then by logistical restraints, not the other way around. This approach allows the commander to more objectively compare requirements against capabilities and to properly consider the risks involved.

It also encourages innovation in finding ways to accomplish the mission, whereas a logistically driven plan tends to establish calculated, inflexible limits.

If a U.S. concept for deep operations by ground maneuver forces was built around the Soviet model, a corps could be used as the attack echelon (Figure 5). To accomplish a penetration to the rear of tactical depth, the corps could conduct either a doctrinal turning movement, which would avoid enemy strength and secure an objective deep in the enemy rear, or a penetration aimed at some vulnerable point in the enemy line. To exploit the breakthrough and build the bridgehead, the army group reserve, an armored division for instance, could lead the development echelon by creating the bridgehead to operational depth. Following the army group reserve would be the regional reserve, which should be a small, ad hoc corps made up of perhaps an air assault brigade, an

A MODEL FOR U.S. DEEP OPERATIONAL MANEUVER

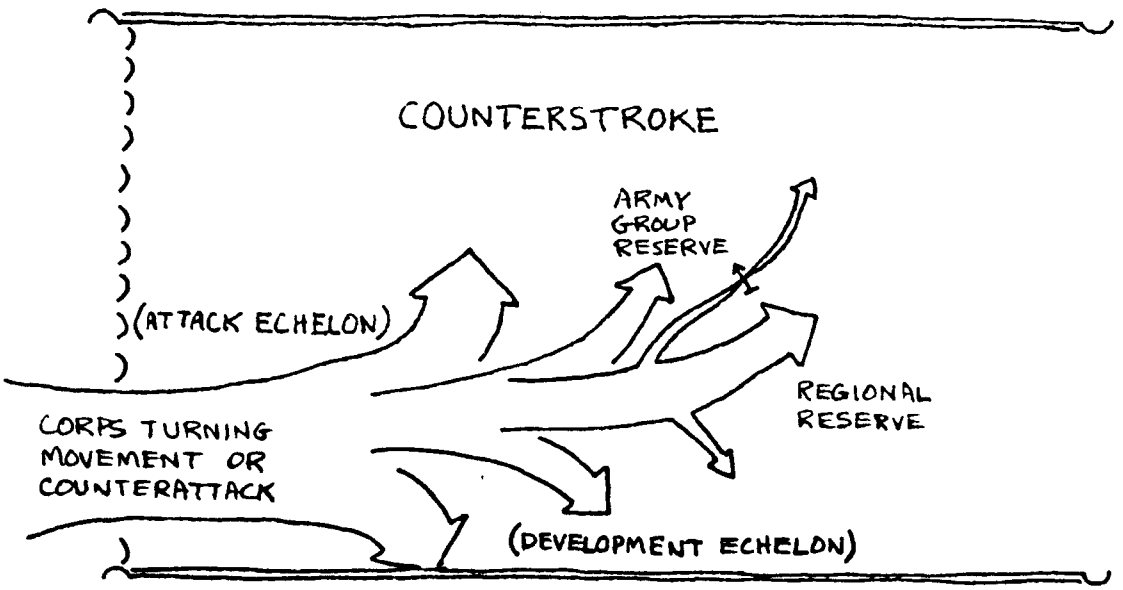

FIGURE 5

aviation brigade, a cavalry regiment, and reinforced armored and mech infantry brigades. Also included would be a heavily

reinforced artillery brigade and a variety of combat support and combat service support units. This deep operations force would be the second part of the attack echelon and would be expected to punch through into operational depth as far as its logistics would allow. From that position it would attack the enemy's vulnerable C^3, logistics, etc.

Due to the unfavorable situation that NATO would find itself in should the Warsaw Pact mount a surprise attack, forces for development and attack echelons would have to come from what was already available in Europe and from what would arrive within the first few days of the war. Some of the assets might even have to come from different countries. The collection of all available units under one command and setting them in motion against the enemy would represent nothing less than a NATO counterstroke based upon three conscious decisions: first, the operational commander is the one who can best visualize the whole battlefield and the big picture, and is, therefore, the one who should make the critical decision of how and when to commit available reserves; second, that the reserves should be consolidated and used operationally as opposed to being sent piecemeal into the tactical level; and third, that the best time to commit the operational reserve would be early in the war while the situation was still fluid and uncertain and when the effects could be most decisive.

It could be argued that deep operations with ground forces could be accomplished under the current doctrine, but I am suggesting that it would be more feasible and effective if a conceptual framework was included within which to plan and conduct it. The example above, modeled after the Soviet OMG concept, is just one way to do it. Regardless of its final form, the concept would require a well rounded combined arms team and a commander who had all the attributes demanded by Airland Battle doctrine, especially initiative and boldness. The forces conducting the deep operation would be subject to continuous air attack, requiring substantial investment in air defense capability and air superiority or parity. A deep operation would certainly be the epitome of friction, requiring careful study to ensure protection

of the force's long LOC's, and that it's culminating point would not be reached.

V. CONCLUSION AND SUMMARY

What The U.S. Could Gain By Having A Doctrinal Concept For Deep Operational Maneuver By Ground Forces

Currently, deep operations by U.S. Army ground forces is only a tactical concept. At the operational level, deep operations are largely a function of air, artillery, and EW, with little emphasis on ground forces and no concept for their employment. An operational expansion of the current deep operations concept to include some kind of OMG-like model could benefit the Army.

If the Soviets attack without a second operational echelon, as Dick and others believe they will, there will not be any major military formations for U.S. operational fires to delay, disrupt, divert, or destroy, as they must under the current doctrine (assuming the one or two divisions in *front* reserve do not constitute a major formation). As a result, those assets will have to be redirected into the close fight, which amounts to an acceptance of the terms of battle set by the Soviets. This clearly surrenders the initiative to the enemy and is directly opposed to the spirit, if not the letter of AirLand Battle doctrine. A concept for deep maneuver would provide the device necessary to seize and exploit the initiative.

Even if the Soviets were to invade with a second operational echelon there is no guarantee that operational fires could attack it. Observations made during exercises at the Battle Command Training Program (BCTP), Fort Leavenworth, indicate that even though the intelligence required to conduct deep operations was good enough for division and corps commanders to make decisions, it was not good enough for targeting.[27] A deep operational maneuver force could conceivably have benefited from, and perhaps capitalized on the type of intelligence that was available.

Another observation made at BCTP was that attrition warfare was the norm and maneuver was only reactive.[28] This suggests that

in spite of having a doctrine that clearly encourages initiative, agility, boldness, and the acceptance of risk, large unit commanders have perhaps not fully embraced those attributes and, therefore, are unable or unwilling to conduct ***maneuver warfare***--to apply strength against weakness to attack enemy cohesion. By their actions they showed their preference to be ***attrition warfare***--pitting strength against strength where superior enemy forces would have the advantage. A concept for deep operations with maneuver forces might help commanders visualize the battlefield differently, and encourage them to better incorporate maneuver into their thinking, in close and rear as well as in deep operations.

The U.S. could gain a lot by including a concept for deep operational maneuver by ground forces in its doctrine, whether it be an OMG-like approach or a different model. U.S. doctrine recognizes that the modern battlefield will not only be non-linear, but also, among other things, widely dispersed.[29] It will probably be impossible to make any distinction between the deep, close, and rear battles. In this environment, where the melee of modern battle will be characterized by meeting engagements between large units, deep operational maneuver could very well have an increased significance in determining the outcome. That has always been recognized by the Soviets, as is evidenced by their long developed deep battle theory. Moreover, their current OMG deep operations concept represents their effort to train as they expect to fight.

> *The one area in which the Soviets see themselves as enjoying a significant superiority over NATO is in their better understanding of the operational level of war and their ability to handle large formations.*

But,

> *If the Alliance can develop an effective operational art of its own, it will, in Soviet eyes, be closing a significant gap in capabilities.*[30]

What could the U.S. Army gain by having a concept for deep operational maneuver by ground forces in a mid- to high-intensity war? The improvement of the operational art by the U.S. and its allies could act to enhance the deterrent value of our doctrine.

Summary

Even though Soviet and U.S. warfighting doctrines recognize the importance of deep operations in a mid- to high-intensity conflict, only the Soviets emphasize deep operational maneuver. This is not surprising given their historical experience and their development of an operational level of war to help them maneuver and fight large units over vast areas. Although the U.S. has recently begun to recognize the importance of the operational level, it has pointedly not included a concept for deep operations with ground maneuver in its doctrine, leaving it primarily to operational fires and electronic warfare. But the U.S. approach assumes the enemy will echelon his forces, and depends on the ability to target and hit those forces before they become engaged in the close fight.

C.J. Dick has suggested that the Warsaw Pact would not accommodate the West by taking the time to mobilize and move forward additional forces for commitment in echelons. Instead, says Dick, they would more likely launch a surprise attack by only forward deployed forces pushed up into a single echelon. If that was the case, a NATO strategy depending on timely warning and FOFA might not deter them. Soviet concern over NATO's growing operational awareness and capability, however, suggests that what *would* be more likely to deter them would be a perception on their part that NATO was willing and able to engage in maneuver warfare in general, and deep operational maneuver in particular.

The U.S. Army has no explicit OMG-like concept, but AirLand Battle doctrine encourages the development and use of such forces. Such a concept could benefit the Army by providing a device with which to

(1) seize and exploit the initiative,

(2) take advantage of, and perhaps capitalize on intelligence not good enough for deep targeting, but good enough for decision making, and

(3) help commanders visualize the battlefield differently, thus encouraging them to better incorporate maneuver into their thinking.

Many have recognized the potentially destabilizing effect of Soviet superiority and the need to do something about it. Traditionally in warfare the development of a maneuver doctrine has accompanied this realization.[31] In the present situation that has meant the development of AirLand Battle doctrine, which, even if not a true maneuver doctrine, certainly centers on maneuver as the dynamic element. An explicit concept for the employment of ground forces in deep operations to achieve operational aims would fit well into existing doctrine, and would provide a model that commanders could use to plan and train for bold maneuver of large units over long distances. It would also provide an excellent vehicle for preparing them to conduct engagements in a fluid, uncertain environment. A deep operational maneuver concept could have these positive effects, and the expansion of our doctrine to include such a concept could help deter enemy attack.

VI. IMPLICATIONS

In recent years rapid technological growth has produced weapons and equipment that are increasingly sophisticated and capable, thus significantly increasing the firepower, protection, and mobility--the combat power--of military units. But the new systems are also more complex, requiring increasing specialization to operate and maintain them. The result has been an increase in support relative to combat personnel and a two-sided dilemma for combat units: whether to increase the number and type of weapons and/or vehicles in a unit to deal with the increasingly complex combat environment; or to streamline units so that they may specialize in a particular type or level of combat. For a division to be versatile enough to operate over a wide variety of contingencies it must necessarily be very large. Its size, however, makes mobility and agility very difficult at best. Consequently, the divisions ability to be an effective maneuver unit is suspect. But, under the current force structure

division's are the primary organizations around which tactical combat formations are built because they have the organic support necessary to sustain their subordinate units in battle.

The large, cumbersome divisions are also limited in their tactical flexibility; armor/mech units are fast and powerful but do not have enough, or the right kinds of infantry to do battle in close terrain; light infantry units can be effective in close terrain but lack the tactical mobility and firepower to be flexible; airborne/air assault infantry have more firepower than the light forces, but lose their mobility once decisively engaged. In the final analysis, a division needs different types of brigades to be effective. By virtue of their smaller size, the brigades are also better suited to an environment requiring rapid, flexible action. This suggests that, to support an OMG-style deep operations concept, brigades are the best formation to maintain as self-supporting tactical entities, and that divisions should be primarily warfighting headquarters that can receive whatever mix of brigades, by type, that the situation calls for.

Another implication of this study concerns the concept of airmechanization, a combined arms concept employing advanced technology systems and relying on a more intimate relationship between armor and helicopters to improve mobility and firepower. There are two approaches to this concept. The "heavy-lift" approach combines light armor, antitank vehicles, and motorized infantry in the same tactical formation with heavy-lift helicopters. This method maintains tanks and helicopters as separate combat systems. The "Main Battle Air Vehicle" (MBAV) approach replaces main battle tanks with lightly armored, heavily armed rotary wing aircraft, thus merging tank and helicopter systems into one vehicle and bridging the track/rotor interface.[32]

Two men, Brigadier Richard E. Simpkin of Great Britain, and General Doctor F.M. von Senger und Etterlin of The Federal Republic of Germany (FRG), were largely responsible for the theoretical development of the "airmech" concept. Their writings, together with, among other things, U.S. Army aviation initiatives, have had an influence on the formation of airmobile units in the FRG, France, and Great Britain. What makes airmech important to

this study is its emphasis on a combined arms, maneuver oriented approach applied at the operational level. The concept leans heavily towards the formation of a highly mobile reserve with brigades of armor/mech, infantry, aviation, and artillery under the direct control of the operational commander to achieve operational aims.

Implicit in the ideas of brigades as the best level at which to maintain flexible, self-sufficient tactical units, and highly mobile and agile airmechanized reserves at the operational level is the requirement for equally flexible and agile logistical support. The system must be capable of moving large quantities of supplies over relatively long distances (tactically speaking) in short periods of time, and be able to change direction or shift priority quickly. Obviously, air lines of support could accomplish this better than ground lines, if we had the aircraft that could accomplish the mission. Because of the modest distances involved (perhaps 100 or 200 kilometers) and the realization that improved landing surfaces might not be available where supplies are needed, vertical landing aircraft would be required.

In view of the nearly logarithmic advances being experienced in technology, it is reasonable to expect that directed energy weapons and advanced missile design may make it impractical to fly near the FLOT in the not too distant future. If that proves to be the case, the Army's commitment to the LHX at the expense of other systems and programs, particularly in Army Aviation, may be ill-advised. What might be more prudent would be to pursue the development of an advanced cargo aircraft (ACA) designed to maintain air lines of support to maneuver units, especially those under the control of the operational commander. The reward would likely be an improvement in our ability to operate on a nonlinear battlefield and, consequently, an increase in initiative, agility, boldness, and a greater willingness to accept risk at all levels of command. As it is, however, the U.S. will probably not

> *. . . make a serious start on ACA until 1998-2000. That is too late, because we will have retired a large percentage of the*

> *CH-47 fleet by 2008. The CH-47D is only meant to last 20 years after modernization. . . . That means retirement starting in 2003. An ACA program beginning in 1998 and yielding the first production aircraft in 2008 is in fact about six years too late.**

Besides reflecting on its current deep operations concept, the U.S. Army should reconsider its Aviation Modernization Plan.

AirLand Battle doctrine provides an important and badly needed operational framework within which to think about the planning and conduct of modern warfare. Deep operations clearly has a place within that framework, but ground maneuver needs to play a more active role, whether that role is similar to that of the OMG or not. Airmechanization and *brigades as the primary tactical maneuver units* are ideas that could play a role in not only a concept for deep operational maneuver, but also in close and rear operations. To maintain the best possible deterrence against a potential enemy it is necessary to explore ideas which could potentially complement our maneuver oriented, fire supported doctrine.

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* This quote is from a letter sent to the author, dated 17 February 1989, by COL Ronald N. Williams, CH-47D Project Manager, U.S. Army Aviation Systems Command (AVSCOM), St. Louis, MO. The letter was in response to the author's first monograph, entitled "Airmechanization: Determining Its Tactical Viability On The AirLand Battlefield." COL Williams stated that he feels there is a need for an ACA, and that there are studies ongoing to define that need.

GLOSSARY

Attrition strategy--The direct approach; attacking strength with strength; characterized by the change of mass over time and favoring the larger force.

Attrition warfare--static warfare pitting strength against strength where superior enemy forces have the advantage.

Deep operations--the activities directed against enemy forces in the deep area.

Maneuver strategy--The indirect approach; attacking weakness with strength; characterized by the interaction of space with mass and time and generally favoring the more mobile force.

Maneuver warfare--using superior maneuver to apply strength against weakness to attack enemy cohesion.

Operational depth--The rear edge of the enemy's defended zone plus the additional depth the mobile force needs to develop its initial maneuver.

Operational level of war--The level where the movement and combat of major military formations is sequenced to achieve specific aims within a predictable time span in order to accomplish strategic military objectives.

Simultaneity--The simultaneous neutralization of the enemy throughout his entire tactical depth.

ENDNOTES

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6. Ibid, p. 34.

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15. Simpkin, p. 62.

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